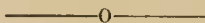


1911. "Notes on the Rotifers or Wheel Animalculae of Brisbane"; Proc. Roy. Soc. Q'land, Vol. XXIII., pp. 87-91.
1914. "Additions to the Rotifera of Queensland"; Proc. Roy. Soc. Q'land, Vol. XXVI., pp. 70-75.
1917. "Lophopus brisbanensis, sp. nov."; Proc. Roy. Soc. Q'land, XXIX., No. 10, pp. 123-124.
1918. "Notes on a New Rotifer—*Melicerta coloniensis*"; Proc. Roy. Soc. Q'land, Vol. XXX., No. 12, pp. 171-174.
1920. "An Interesting Copepod"; Queensland Naturalist, Vol. II., No. 4, pp. 105-106.
1921. "Water Bears, or Tardigrada"; Queensland Naturalist, Vol. III., No. 2, pp. 28-29.
1922. "A Wonderful Rotifer"; Queensland Naturalist, Vol. III., No. 3, pp. 50-51.
1922. "A Telescoping Rotifer"; Queensland Naturalist, Vol. III., No. 6, page 111.
1923. "Notes on Rotifers and Some of the Life in the Chelmer Swamp"; Queensland Naturalist, Vol. IV., No. 3, pp. 57-58.
1925. "A New Rotifer of the Melicertan Family"; Proc. Roy. Soc. Q'land, Vol. XXXVI., pp. 137-138.



BIRDS OF THE CAPE YORK REGION, NORTH QUEENSLAND.

By H. G. Barnard.

October being considered "bird month" in Queensland, I was asked to give a short paper on bird matters before members of the Queensland Naturalists' Club, and have decided to talk on some of the birds of the Cape York district. As some of you are probably not familiar with that part of Queensland, I think a short description of the country and conditions there, would not be out of place. Cape York, the most northern part of Australia, is a barren, rocky point, and separated from the mainland by a narrow channel, is a rocky island, on which stands a light house. The light is a revolving one and automatic. No one lives there, and it is only visited now and again by the light ship to replenish the fuel and to see that everything is in working order.

Ten miles down the west coast, is the Peak Point telegraph station, the most northern telegraph station in Australia. Ten miles east of Cape York and situated in Albany Pass, is "Somerset House." Albany Pass is, I consider, one of the most beautiful, if not the most beautiful, pass in Australia. On a scrubby hill near

Somerset, was the original settlement, before it was moved to the desolate spot known as Thursday Island. The moving of the settlement to Thursday Island was a very great mistake. Millions of tons of rock exist on either side of the pass, and by blocking the eastern end of the pass, one of the finest and most beautiful harbours in the world would have been made. Not only that, but settlement would have spread over the Cape and could have been reached by land as well as by water, whereas now Thursday Island can never be any good for settlement.

Albany Island forms one side of the pass, and on the mainland about the centre of the pass, Somerset House is built. For many years it was occupied by that great pioneer of the north, Mr. Frank Jardine, and his family. Frank Jardine and his wife now rest in a beautiful spot just above high water, in the pass that he loved so well.

The country, generally, consists of large tracts of scrub, or rain forest, with belts of open forest, which consist of several kinds of eucalypts and other trees, such as *Melaleuca* (tea-tree) and wattles (*Acacia*). There are no mountains, but some of the hills are fairly high and very rough.

There are only two seasons in that part—the south-east and north-west. From April to November the wind blows steadily day and night from the south-east. During this period very little rain falls, and most of the waters dry up. Then towards the end of November or beginning of December the wind veers to the north-west. Thunderstorms occur, and are followed by heavy rains, which continue till the end of March. Dry creeks become raging torrents, swamps are filled; the scrubs teem with insect and bird life, and in the open parts, the grass, which has all been burnt off, grows rapidly till it is almost impossible to walk through it. Trees and shrubs are laden with bloom, and in the scrubs acres of lilies and ground orchids bloom, a veritable Garden of Eden, and the serpents are there, too. Numbers of them, large and small, many grow to 20 feet and over in length.

Now we must get on to the birds. If you were on Cape York during the so-called winter months (for there is really no winter, the thermometer rarely going below 60 deg.), you would be struck by the seeming absence of bird life, because in the dark scrubs or rain forests the birds are very silent and are seldom seen. But as winter gives place to spring, the scrubs awake to life; especially is this so in the early morn, when one wakes to hear the

drumming of the emu, the cackling of the megapode or scrub hen, the clear whistle of the rifle bird, the cooing of numerous fruit pigeons, the shrill whistling notes of the great palm cockatoo, and a host of other birds.

As spring advances, so the number of birds increase, their ranks being augmented by the thousands of migrants from New Guinea and adjacent islands. If you were on the extreme northern point of Cape York, you would see all day long, and day after day for weeks, birds passing to the mainland. Many arrive singly, or in twos and threes; others in flocks of from 15 or 20 to a hundred or more; some of them skim the surface of the sea, and many perish through getting their feathers wet. Others fly high, almost out of sight. Not only during the day does this migration take place, but also at night. Such birds as the Roller or Dollar-bird, Pittas, Kingfishers, and Mopokes cross at night. Probably on account of being poor flyers, they cross at night to escape hawks. Many of these migrants remain on Cape York to nest, others continue their flight south, some even reaching Victoria. After the nesting is over, most of the visitors return to the islands, though, at times some of them remain with us during the winter. These are probably late broods, or old birds that do not feel equal to the return journey.

I am sorry to say that during a recent visit to the North, I was informed on good authority that the number of birds has greatly decreased of late years, especially so in the case of the beautiful Straits, or Nutmeg pigeons (*Myristicivora spilorrhoa*). At one time these birds came over from New Guinea in hundreds of thousands, most of them returning to the islands along the coast from Cooktown to Roekingham Bay to breed. I have seen every tree and bush on some of the islands covered with their nests, some even building on the rocks and among the ferns, only a single egg is laid. The black butcher birds are great robbers of the pigeons' nests, waiting their chance when the pigeon leaves the nest for a short while, to seize the egg or young.

During the day the male pigeons repair to the mainland to feed on the wild fruits, returning to the islands in the evening to feed their brooding mates.

Tremendous toll was taken by pot hunters, and as population increased in the North so the slaughter increased, and thousands of young birds died in the nests. For some years these pigeons have been on the totally

protected list. This, however, does not mean the slaughter has ceased, and they are fast nearing the point of extinction.

I will now say a few words on the nesting habits of some of the birds. First on the list come the beautiful rifle birds. These birds really belong to the Paradise family. In Australia we have three Rifle birds. Most of you are familiar with the bird of the southern parts, at least in the scrubs. A smaller one, the Victoria Rifle bird, is found from north of Townsville to Cooktown, and a larger one on Cape York. For a long while the eggs of these birds were much sought after by collectors, and a set of eggs from the Cairns district were described by Mr. A. J. Campbell as belonging to the Victoria Rifle bird. This, however, was proved wrong.

In 1892 the late Mr. Dudley Le Souef and myself landed on one of the Barnard Islands, where we spent a week, and were fortunate in finding a nest with a single egg. This, the type egg, is now in the Australian Museum, Sydney. The nest was a very loosely built structure, composed of large dead leaves, lined with a few vine tendrils, and draped with the shed skin of a snake. It was placed in the top of a Screw Palm, or Pandanus. This placing the shed skin of a snake round the nest is a feature peculiar to the Victoria and Southern Rifle birds. The Albert Rifle bird of Cape York does not use these decorations. Four years after finding the egg of the Victoria Rifle bird, in 1896, while wandering in the scrubs of Cape York, I came across a nest built in the top of a small palm about 6 feet from the ground, and on placing my hand in the nest, lifted out a beautiful pair of eggs, which I at once recognised as belonging to a Rifle bird. While waiting for the return of the parent bird, to be quite sure of its identity, I heard a rustle in the leaves behind me, and turning round saw a small 'goanna,' or Gould's Monitor, holding a very large centipede by the head. For a while the "goanna" watched me, while the centipede crawled round its head in a vain endeavour to escape. With a sudden gulp the centipede disappeared, and I will leave to your imagination what that monitor felt like inside.

The following year the eggs of the Southern Rifle bird were taken on the Richmond River, and so the nesting habits of the three Rifle birds were known. The note of the Cape York bird is a loud, clear whistle, repeated three times.

Manucode (*Phonygammus keraudrenii*).—This is another of the Paradise family, and is the only representative of the Manucodes in Australia, though New Guinea has several, one very beautiful member of the family being found on Ferguson Island, off the east coast of New Guinea. These birds have a very curious formation of the windpipe, which continues just under the skin to the lower end of the breast bone, where it is curled round and round like a piece of rope, finally returning under the skin and entering the body at the base of the neck. I do not think this has anything to do with the call, as the note is short and harsh, except in the case of the Ferguson Island bird, which has a long trumpeting call. I was fortunate in discovering a nest and eggs of the Manucode on Cape York in 1896, also in finding a peculiar trait in the nesting habits.

Most birds shun the company of butcher birds, on account of their murderous instincts, and the black butcher bird (*Cracticus Quoyi*), of northern parts, live well up to their reputation." However, the Manucode, "a very shy bird, mostly found in the tops of the tallest scrub trees, and a fruit eater," cultivates the company of the black butcher bird, especially at nesting time, building in the same or an adjoining tree. The Manucode does not start building till some time after the butcher bird, so the butcher birds generally have eggs first. If these are taken the Manucodes at once desert their nest and follow the butcher birds to a fresh nesting site. This is probably done for protection, as both are black birds. I have seen a white cockatoo unwittingly approach a black butcher bird's nest, and being attacked by both birds, driven to the ground and given a bad time till I interfered on cocky's behalf.

Palm Cockatoo (*Microglossus aterrimus*).—This is one of, if not our most interesting cockatoo. Black, with a large red patch of skin on the sides of the head, a black crest, like the feathered headdress of an Indian chief, and a loud whistling call, it at once attracts attention. The food consists of the kernels of large nuts growing in the scrubs, the hardest of which are easily cracked open with the powerful beak. As these nuts are plentiful during the wet season, the birds nest at that time.

Being a large bird, they select a large upright hollow from three to six feet in depth. One would imagine that the heavy rain pouring down the hollow would de-

stroy the single egg, or drown the young bird. But Nature does not make mistakes of this kind, and has endowed the birds with brains or instinct to overcome the difficulty. The only suitable breeding hollows are to be found in the large Bloodwood (*Eucalyptus*) or *Melaleuca* trees growing in forest country. In preparing the nesting hollow, the birds repair to the nearest scrub, in some instances from half a mile to a mile away. Here they select a straight bough about eighteen inches in length by one inch in diameter. This is soon cut through with their powerful beaks. Then holding the stick near the centre, with the beak, they fly to the hollow, and drop the stick inside; then climb down and reduce it to splinters from three to six inches in length. The performance is repeated till a platform is raised from six to eight inches high. On this the egg is laid, and so the egg and young bird are kept off the wet bottom of the hollow. The reason the birds select "scrub" timber is on account of it being much softer and more easily reduced to splinters than the hardwoods of the forest.

You all probably know that pest, the introduced starling. Well, we also have a starling in Queensland, and a far more interesting one than the introduced bird. This bird (*Calornis metallica*), also known as the weaver bird, crosses from New Guinea during the months of September and October, and spreads over the whole of the scrubs of northern Queensland. The birds congregate in flocks of many hundreds, and have a habit of rising in the air like a cloud, then whirling with incredible speed, dash through the tree tops; and yet I have never seen a single bird injured while doing so. How they escape colliding with each other and the trees is a marvel. In nesting they select a large tree, either in scrub or forest, and construct their nests of vine tendrils woven and matted together in great bunches. So great does the weight become, the branches often break, and many eggs broken and young birds killed. I have counted as many as three hundred nests in a single tree. Their food consists chiefly of berries, and it shows how bountiful Nature is, when the scrubs can produce sufficient to keep such enormous numbers of birds in food. When nesting they are very noisy, and one can easily locate a nesting tree by the noise. Care should be taken not to stand under a nesting tree, as these birds become grossly infested by a minute red parasite commonly known as "scrub itch," and anyone standing under a nesting tree is in for a bad

time afterwards. On completion of nesting the birds return whence they came.

Fawn-breasted Bower bird (*Chlamydera cerviniventris*).—This is a coastal bird and inhabits the black tea-tree country. It does not go inland. It is distinguished from the spotted and great Bower birds, by having no lilac patch on the nape of the neck. The bower resembles those of the spotted and great Bower birds, but is small and does not contain shells. It has, however, green and red berries and red flowers. I tried placing bits of blue ribbon in one bower, but the birds would have none of it, and as often as I put the bits in the bower, would take them out and drop them ten or fifteen feet away. I got tired of the game first. The nest and eggs are similar to those of the other bower birds.

Great Bower bird (*Chlamydera nuchalis*).—This, the largest of the Bower birds, keeps more to inland parts, though it does at times visit the coast. They are very fond of shells for the bower, especially small sea shells, and I have seen numbers of them in bowers fully four miles from the sea, showing the birds go long distances to obtain suitable toys. The nest and egg are similar to the fawn-breasted bird, but it is only on very rare occasions more than one egg is laid.

There are two kinds of Dragoon birds, or Pittas, on Cape York—*Pitta simillima* and *Pitta maeklotii*. As both have the same habits, I am taking them together. *Pitta simillima* resembles our southern bird, while *Pitta maeklotii* is known as the blue-breasted Pitta. They build bulky stick nests at the foot of a tree, and lay from three to four eggs. Both birds migrate to New Guinea and adjacent islands. If you were working the scrubs in September and October, you would probably not see or hear a single Pitta. Then one morning early in November you will enter the scrub and be greeted with the notes of two strange birds. These notes seem to come from every direction, and for some while you find it hard to locate the birds; then, happening to look in a tree, you will see a Pitta standing on a thick bough, looking very tired. On looking round you will observe quite a number of them—both kinds. They evidently arrive during the night and light on the trees till rested, afterwards taking to the ground. Though essentially a ground bird, Pittas roost in trees, where I have frequently seen them, when working the scrubs for insects at night with a light.

When in the scrubs at night with your lamp you will often come across what appears at first glance to be a ball of fluff or wool. On looking closer you make it out to be a bird. The feathers are puffed out all round, so that the head and tail are completely hidden. The birds appear to be sound asleep, and you can place your hand over them and lift them off their perch before they move. The habit of puffing out the feathers is evidently a protection against snakes, as a snake attempting to take hold of a bird in this position would only get a mouthful of feathers.

A very beautiful bird is the silver-tailed kingfisher (*Tanysiptera sylvia*). This bird is also a migrant, and was supposed to cross from New Guinea, but the late Mr. A. J. North, of Sydney, once informed me it had never been found in New Guinea. Probably it comes from the Dutch portion. It is a day bird, yet it crosses at night. I was told by men of the pearling boats, that the birds often come to the lights on the boats, a proof they cross at night. They cross to Queensland in November, and at once get to work tunnelling into the small termites' mounds that are found on the ground all through the northern scrubs. During nesting operations the beautiful tail feathers get broken off, but are replaced at the next moult.

Red-necked Rail (*Rallina tricolor*).—This is a scrub bird and is never found in the open. For a long while there was a lot of confusion over the eggs of this rail, as nests with pure white eggs and others with spotted eggs were found, and both were supposed to belong to this rail. The late Mr. Kendal Broadbent, who did a lot of collecting in northern parts for the Queensland Museum, was of the opinion the eggs belonged to different birds. This proved to be correct. In 1911 Mr. W. McLennan, who was collecting for Dr. W. McGillivray of Broken Hill, and myself, who was collecting for the great bird man, the late Mr. H. L. White, of Belltrees, New South Wales, were able to solve the problem. Mr. McLennan found a nest containing spotted eggs, and secured the bird. This proved to be the Rufous-tailed Moor Hen.